

when $0.04 \leq S \leq 0.09$ (mass percent)

$$150 \leq Hv^* \leq 400 \times S + 175 \quad (1)$$

when $0.09 \leq S \leq 0.20$ (mass percent)

$$510 \times S + 104 \leq Hv^* \leq 400 \times S + 175 \quad (2)$$

when $0.20 \leq S \leq 0.27$ (mass percent)

$$510 \times S + 104 \leq Hv^* \leq 255 \quad (3)$$

wherein $S : [O] + [N] + [C]$ (mass percent)

Hv^* : Vickers hardness in the cross-sectional area of the work-hardened product.--

--6. (New) A method for manufacturing the titanium with impact resistance according to claim 5 in which preliminary working is applied before forming so that Vickers hardness Hv^* in the cross-sectional area of the formed product satisfies one of said equations (1), (2) and (3).--

--7. (New) A method for manufacturing the titanium with impact resistance according to claim 6 in which the preliminary working applied before forming so that Vickers hardness Hv^* in the cross-sectional area of the formed product satisfies one of said equations (1), (2) and (3) comprises either or both of rolling and leveling with rolls applied in a direction perpendicular to the direction of hot- or cold-rolling applied prior to said preliminary working.--

--8. (New) A method for manufacturing the titanium with excellent impact resistance according to claim 6 in which annealing is applied before or during forming so

that Vickers hardness H_v^* in the cross-sectional area of the formed product satisfies one of said equations (1), (2) and (3).--

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